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| 30593 7590 03/18/2008 HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 8910 RESTON, VA 20195 | | | | |
| EXAMINER HOPKINS, ROBERT A | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/506,791

Applicant(s)

HALAND ET AL.

Examiner

Robert A. Hopkins

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-20, 22 and 24-32 is/are rejected.
- 7) ☒ Claim(s) 4, 21 and 23 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date 9-7-04
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the inlet which is connected to a pre-treatment unit for carrying out a first liquid/gas separation, which pretreatment unit comprises an inlet cyclone separator arranged in the lower compartment in claims 12, 17, 28 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

Claims 8,9,13,14,18,23,24,26,29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 18,29 provides for the use of a device, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 18,29 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim 8 recites "the upright column". There is a lack of antecedent basis for "the upright column" in previous claim limitations. Correction is requested.

Claim 9 recites "the thickness". There is a lack of antecedent basis for "the thickness" in previous claim limitations. Correction is requested.

Claim 13 recites "the column". There is a lack of antecedent basis for "the column" in previous claim limitations. Correction is requested.

Claim 14 recites "the column". There is a lack of antecedent basis for "the column" in previous claim limitations. Correction is requested.

Claim 23 recites "the mesh". There is a lack of antecedent basis for "the mesh" in previous claim limitations. Correction is requested.

Claim 24 recites "the mesh". There is a lack of antecedent basis for "the mesh" in previous claim limitations. Correction is requested.

Claim 26 recites "the K-value". There is a lack of antecedent basis for "the K-value" in previous claim limitations. Correction is requested.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,3,5,6,7,9,19 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Goodloe(2521785).

Goodloe teaches a device for treating a gas/liquid mixture comprising an upright vessel(10) with a lower and upper compartment, an inlet(15) for admitting the flow of mixture into the lower compartment, an agglomerating unit(17; column 3 lines 30-60) placed between the lower and upper compartment for enlarging the liquid droplets in the mixture, a separator(20; column 3 lines 62-74) arranged in the upper compartment downstream of the agglomerating unit for further separating the mixture into a substantially liquid containing mixture part and a substantially gas containing part, a lower outlet(27) for discharging the substantially liquid-containing mixture part from the

lower compartment, an upper outlet(24) for discharging the substantially gas containing mixture part from the upper compartment, collecting means(25) for collecting in or downstream the agglomerating unit the liquid droplets which have broken through the agglomerating unit, and recycling means for recycling the collected liquid from the collecting means to the lower compartment. Goodloe further teaches wherein the agglomerating unit comprises a wire mesh. Goodloe further teaches wherein the collecting means are arranged over substantially 15% of the cross section of the vessel. Goodloe further teaches wherein the mesh is embodied to allow the supplied liquid to break through from a minimum K-value of about 0.1. Goodloe further teaches wherein the agglomerating unit extends substantially horizontally. Goodloe further teaches wherein the thickness of the agglomerating unit is substantially constant. Goodloe further teaches wherein the liquid contains at least one of oil and water.

Claims 2,20,22,24,30 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Goodloe(2521785).

Goodloe teaches a device for treating a gas/liquid mixture comprising an upright vessel(10) with a lower and upper compartment, an inlet(15) for admitting the flow of mixture into the lower compartment, an agglomerating unit(17; column 3 lines 30-60) placed between the lower and upper compartment for enlarging the liquid droplets in the mixture, a lower outlet(27) for discharging the substantially liquid-containing mixture part from the lower compartment, an upper outlet(24) for discharging the substantially gas containing mixture part from the upper compartment, collecting means(25) for collecting in or downstream the agglomerating unit the liquid droplets which have

Art Unit: 1797

broken through the agglomerating unit, and recycling means for recycling the collected liquid from the collecting means to the lower compartment. Goodloe further teaches wherein the agglomerating unit comprises a wire mesh. Goodloe further teaches wherein the collecting means are arranged over substantially 15% of the cross section of the vessel. Goodloe further teaches wherein the mesh is embodied to allow the supplied liquid to break through from a minimum K-value of about 0.1. Goodloe further teaches wherein the liquid contains at least one of oil and water.

Claims 1,3,5,6,7,8,9,10,11,19,25 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by McEwan(4767424)

McEwan teaches a device for treating a gas/liquid mixture comprising an upright vessel(1) with a lower and upper compartment, an inlet(2) for admitting the flow of mixture into the lower compartment, an agglomerating unit(6; column 4 lines 31-35 and 58-61) placed between the lower and upper compartment for enlarging the liquid droplets in the mixture, a separator(7; column 4 lines 62-65) arranged in the upper compartment downstream of the agglomerating unit for further separating the mixture into a substantially liquid containing mixture part and a substantially gas containing part, a lower outlet(5) for discharging the substantially liquid-containing mixture part from the lower compartment, an upper outlet(8) for discharging the substantially gas containing mixture part from the upper compartment, collecting means(4) for collecting in or downstream the agglomerating unit the liquid droplets which have broken through the agglomerating unit, and recycling means for recycling the collected liquid from the collecting means to the lower compartment. McEwan further teaches wherein the

agglomerating unit comprises a wire mesh. McEwan further teaches wherein the collecting means are arranged over substantially 15% of the cross section of the vessel. McEwan further teaches wherein the mesh is embodied to allow the supplied liquid to break through from a minimum K-value of about 0.1. McEwan further teaches wherein the agglomerating unit extends substantially horizontally. McEwan further teaches wherein the agglomerating unit extends substantially the whole cross section of the upright column. McEwan further teaches wherein the thickness of the agglomerating unit is substantially constant. McEwan further teaches wherein the separator comprises one or more cyclone separators(22). McEwan further teaches wherein the separator comprises one or more axial recycle cyclone, the liquid discharge of which extends from the separator to below the liquid level in the lower compartment. McEwan further teaches wherein the liquid contains at least one of oil and water. McEwan further teaches wherein the separator comprises one or more axial recycle cyclones , the liquid discharge of which extends from the separator to below the liquid level in the lower compartment.

Claims 2,20,22,30 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by McEwan(4767424).

McEwan teaches a device for treating a gas/liquid mixture comprising an upright vessel(1) with a lower and upper compartment, an inlet(2) for admitting the flow of mixture into the lower compartment, an agglomerating unit(6; column 4 lines 31-35 and 58-61) placed between the lower and upper compartment for enlarging the liquid droplets in the mixture, a lower outlet(5) for discharging the substantially liquid-

Art Unit: 1797

containing mixture part from the lower compartment, an upper outlet(8) for discharging the substantially gas containing mixture part from the upper compartment, collecting means(4) for collecting in or downstream the agglomerating unit the liquid droplets which have broken through the agglomerating unit, and recycling means for recycling the collected liquid from the collecting means to the lower compartment. McEwan further teaches wherein the agglomerating unit comprises a wire mesh. McEwan further teaches wherein the collecting means are arranged over substantially 15% of the cross section of the vessel. McEwan further teaches wherein the liquid contains at least one of oil and water.

Claims 13,15,31 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Goodloe(2521785).

Goodloe teaches a method for treating a gas/liquid mixture in an upright vessel with a lower and upper compartment comprising feeding the gas/liquid flow into the lower compartment of the vessel, guiding the gas/liquid flow through an agglomerating unit(17) arranged between the lower and upper compartment at high speed such that liquid breaks through to a position beyond the downstream surface of the agglomerating unit, collecting the broken through liquid, recycling the collected liquid to the lower compartment, guiding the mixture through a separator(20) in the upper compartment for further separating the mixture into a substantially liquid containing mixture part and a substantially gas containing mixture part, and discharging the mixture from the lower compartment and discharging the mixture from the upper compartment. Goodloe further

teaches wherein the K-value of the supplied mixture amounts to at least 0.1 . Goodloe further teaches wherein the liquid contains at least one of oil and water.

Claims 14,26,32 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Goodloe(2521785).

Goodloe teaches a method for treating a gas/liquid mixture in an upright vessel with a lower and upper compartment comprising feeding the gas/liquid flow into the lower compartment of the vessel, guiding the gas/liquid flow through an agglomerating unit(17) arranged between the lower and upper compartment at high speed such that liquid breaks through to a position beyond the downstream surface of the agglomerating unit, collecting the broken through liquid, recycling the collected liquid to the lower compartment, and discharging the mixture from the lower compartment and discharging the mixture from the upper compartment. Goodloe further teaches wherein the liquid contains at least one of oil and water.

Claims 13,15,16,31 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by McEwan(4767424)

McEwan teaches a method for treating a gas/liquid mixture in an upright vessel with a lower and upper compartment comprising feeding the gas/liquid flow into the lower compartment of the vessel, guiding the gas/liquid flow through an agglomerating unit(6) arranged between the lower and upper compartment at high speed such that liquid breaks through to a position beyond the downstream surface of the agglomerating unit, collecting the broken through liquid, recycling the collected liquid to the lower compartment, guiding the mixture through a separator(22) in the upper compartment for

further separating the mixture into a substantially liquid containing mixture part and a substantially gas containing mixture part, and discharging the mixture from the lower compartment and discharging the mixture from the upper compartment. McEwan further teaches wherein the K-value of the supplied mixture amounts to at least 0.1 . McEwan further teaches separating the mixture in the upper compartment by guiding the mixture through one or more cyclone separators and carrying the separated liquid part to the lower compartment and the separated gas part to the upper outlet. McEwan further teaches wherein the liquid contains at least one of oil and water.

Claims 14,26,27,32 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by McEwan(4767424)

McEwan teaches a method for treating a gas/liquid mixture in an upright vessel with a lower and upper compartment comprising feeding the gas/liquid flow into the lower compartment of the vessel, guiding the gas/liquid flow through an agglomerating unit(6) arranged between the lower and upper compartment at high speed such that liquid breaks through to a position beyond the downstream surface of the agglomerating unit, collecting the broken through liquid, recycling the collected liquid to the lower compartment, and discharging the mixture from the lower compartment and discharging the mixture from the upper compartment. McEwan further teaches separating the mixture in the upper compartment by guiding the mixture through one or more cyclone separators and carrying the separated liquid part to the lower compartment and the separated gas part to the upper outlet. McEwan further teaches wherein the liquid contains at least one of oil and water.

Allowable Subject Matter

Claims 4,21,23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 4,21 recites "wherein the collecting means comprise at least one collecting reservoir extending in the agglomerating unit for collecting the broken through liquid therein, and wherein recycling means comprise a discharge conduit extending from the collecting reservoir to below the level of the liquid collected in the lower compartment.". Neither Goodloe nor McEwan teach at least one collecting reservoir extending in the agglomerating unit for collecting the broken through liquid therein, and wherein recycling means comprise a discharge conduit extending from the collecting reservoir to below the level of the liquid collected in the lower compartment. It would not have been obvious to someone of ordinary skill in the art at the time of the invention to provide at least one collecting reservoir extending in the agglomerating unit for collecting the broken through liquid therein, and wherein recycling means comprise a discharge conduit extending from the collecting reservoir to below the level of the liquid collected in the lower compartment because neither Goodloe nor McEwan suggest such a modification. Claim 23 depends on claim 4 and hence would also be allowable upon incorporation of claim 4 into claim 1.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert A. Hopkins whose telephone number is 571-272-1159. The examiner can normally be reached on Monday-Thursday, 7:30am-5pm, every Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Rah
March 11, 2008

/Robert A Hopkins/
Primary Examiner, Art Unit 1797